

REMARKS/ARGUMENTS

This is Applicants' response to the office action of December 8, 2005 which indicated that the amendment filed on September 20, 2005 was non-compliant because the amendment failed to list all of the claims. Applicants represent the amendment of September 20, 2005 with the addition of the listing of claims 12-20 as canceled. Claims 1, 2, 7, 8, 10, 11, 21-23 are pending in the application, and claims 7, 8, and 11 have been allowed.

In the Office Action of May 23, 2005, the specification was objected to under 35 USC 132 because the Examiner has taken the position that Applicants' previous amendment filed April 15, 2005 introduced new matter into the disclosure. The Examiner has taken the position that the added material in claims 1 and 7, more specifically "wherein the working fluid comprises molecules having a carbon-to-carbon bond" and "wherein the first flow path does not include a steam reforming reactor to reform the working fluid" constitutes new matter. Applicants have deleted the objectionable language "wherein the working fluid comprises molecules having a carbon-to-carbon bond" and has replaced the same with "wherein the working fluid comprises molecules comprising carbon" as set forth in claim 1 as currently amended, with similar limitations in claim 7 as amended. Support for the amendment as set forth in the instant application at page 7, lines 9-11 which discloses organic cooling fluids and particularly R114 (CClF₂CClF₂). Such disclosure inherently discloses a molecule comprising carbon.

Applicants maintain that the limitations "wherein the first flow path does not include a steam reforming reactor to reform the working fluid" is supported by Applicants'

disclosure, specifically Figures 1 and 2. It is clear from Figures 1 and 2 that Applicants disclose Rakine loop does not include a steam reforming reactor to reform the working fluid.

The Examiner has taken the position that Applicants' claim language includes a negative limitation and fails to comply with the written description requirement under MPEP 2163, more particularly MPEP 2173.05(i) Negative Limitations. However, the Examiner's position with respect to MPEP 2173.05(i) is completely misplaced and is contrary to that section of the MPEP. MPEP 2173.05(i) states:

The current view of the courts is that there is nothing inherently ambiguous or uncertain about a negative limitation. So long as the boundaries of the patent protection sought are set forth definitely, albeit negatively, the claim complies with the requirements of 35 USC 112, second paragraph.***

A claim which recites a limitation "said homopolymer being free from proteins, soaps, resins, and sugars present in natural Hevera rubber" in order to exclude the characteristics of the prior art product, was considered definite because each recited limitation was definite. In re Wakefield, 422 F.2d 897, 899, 904, 164 USPQ 636, 638, 641 (CCPA 1970). In addition, the court found that the negative limitation "incapable of forming a die with said oxide developing agent" was definite because the boundaries of the patent protection sought were clear In re Barr, 444 F.2d 588, 170 USPQ 330 (CCPA 1971).

Any negative limitation or exclusionary proviso must have basis in the original disclosure. If alternative elements are positively recited in the specification, they may be explicitly excluded in the claims. (Citation omitted) ("[The] specification, having described the whole, necessarily described the part remaining."). (Citation omitted) The mere absence of a positive recitation is not basis for an exclusion.*** Note that a lack of literal basis in the specification for a negative limitation may not be sufficient to establish a *prima facie* case for lack of descriptive support. (Citation omitted)

Contrary to the Examiner's position, MPEP 2173.05(i) states that the use of a negative limitation to define the metes and bounds of the claimed subject matter is a permissible form of expression. In re Wakefield, 57 CCPA 959 (1970). Further, it is not necessary for the negative limitation to find literal support in the written description. Applicants maintain that they are entitled to rely on the drawings as a basis for support for the negative limitations. It is clear from Figures 1 and 2 that Applicant disclosed a Rankine loop did not include a steam reforming reactor. Withdrawal of the rejection is respectfully requested.

Claims 1 and 7 were rejected under 35 USC 112, first paragraph, because the Examiner has taken the position that although the specification is enabling with respect to a specific organic working fluid having a carbon-carbon bond, the specification does not reasonably provide enablement for the large (indefinite) number of organic fluids or compounds also having a carbon-carbon bond. Applicant has amended claims 1 and 7 to delete the objected to language and replaced it with the limitation "comprises molecules comprising carbon". In this regard, Applicants respectfully submit that the Examiner is confusing the concept of breadth with enablement. Rankine cycle loops and working fluids for such loops are known by those skilled in the art. The fact that Applicants' claims are broad does not mean that they are not enabled by the specification. The Examiner has pointed to no evidence to indicate that a person of ordinary skill in the art would not know how to practice the invention based upon the disclosure. Furthermore, the Examiner has presented no authority in law to support the position that the disclosure must enable each and every possible embodiment of the claimed invention. Withdrawal of the rejection is respectfully requested.

Claims 1-2 and 10 were rejected under 35 USC Section 112, second paragraph, as being indefinite on the basis of including the negative limitation "wherein the first flow path

does not include a steam reforming reactor to reform the working fluid". Applicants' above comments regarding negative limitations are hereby repeated. The negative limitations set forth in claims 1-2 and 10 are fully supported by Applicants' Figures 1 and 2. Withdrawal of the rejection is respectfully requested.

Claim 1 has been rejected under 35 USC 103(a) as being unpatentable over Bloomfield 3,982,962 in view of Myerhoff 4,431,714. However, the Examiner's rejection fails to address the limitation "wherein the first flow path does not include a steam reforming reactor to reform the working fluid". Although the Examiner may reject this negative limitation under 35 USC 112, it is improper to conduct the obviousness determination without fully addressing the limitation. Because the rejection under 35 USC 103 fails to address the negative limitation, no prima facie case of obviousness has been established.

Claim 2 had been rejected under 35 USC 103(a) as being unpatentable over Bloomfield as applied to claims 1 above, and further in view of Ennis, et al. 5,938,975. However, the Examiner's rejection improperly ignores the limitations "wherein the first flow path does not include a steam reforming reactor to reform the working fluid".

Claim 10 has been rejected under 35 USC 103(a) as being unpatentable over Bloomfield as applied to claim 1 above and further in view of Keller 3,968,999. The Examiner has taken the position that Keller discloses that a halo-substituted hydrocarbon like Freons are suitable refrigerant for the standard heat exchange apparatus employed in refrigeration plants to cool methanol citing Keller at column 6, lines 52-68. The Examiner also maintains that Keller further discloses that methanol is a prime candidate for generating electricity in fuel cells, citing Keller at column 10, lines 8-20. Examiner maintains that because Keller discloses that a halo-substituted hydrocarbon can be used as a refrigerant to cool methanol and because Keller

discloses that methanol is a prime candidate for generating electricity in fuel cells, a person of ordinary skill in the art would have sufficient motivation to use Keller's refrigerant in methanol fuel cells or fuel cells employing methanol. However, the suggestion in Keller is to use the refrigerant to cool the methanol in the fuel cell. Keller does not suggest using a halo-substituted hydrocarbon in a Rankine cycle loop that includes a fuel cell stack in a fuel cell system. If anything, Keller suggests using a refrigerant to cool methanol in a storage tank that later will be used in a fuel cell system. Applicants maintained that no *prima facie* case of obviousness has been established.

The Examiner's attention is respectfully directed to newly added claims 21-22 which depend from claims 1 and 7 respectfully, and add the further limitation "wherein the molecules further comprise a halide". Although Bloomfield discloses a reformable gas to include naphtha or methane, such does not suggest a working fluid including a carbon and a halide.

The Examiner's attention is respectfully directed also to newly added claim 23 which depends from claim 1 and further adds the limitation "wherein the first flow path and the second flow path do not share a common portion. Support for the limitation is found in Applicants' Figures 1 and 2 which clearly show a Rankin cycle loop which is separate from the flow path of a fuel being reformed by a steam reforming processor. Since, according to the Examiner's position, Bloomfield discloses that the water Rankine cycle loop and the fuel reforming loop should be combined and share a common portion, therefore Bloomfield teaches away from Applicants' newly added claim 23.

Applicants hereby authorize the examiner to charge Applicants' deposit account number 07-0960 the fee associated with newly added claims 21-23.

Applicants have attached hereto a petition for a one-month extension of time in order to file this amendment. In view of the above amendments and remarks, Applicants respectfully request reconsideration and allowance of the claims now on the case.

Respectfully submitted,



Cary W. Brooks
Reg. No. 33,361
(313) 665-4717